

THE IRIDACEAE OF DANIEL DE LA ROCHE

P. Goldblatt

(Department of Botany, University of Cape Town)

and T. T. Barnard

ABSTRACT

A study of the thesis *Descriptiones Plantarum Aliquot Novarum* by Daniel de la Roche was undertaken with a view to establishing the identity of the 20 species of South African Iridaceae which were described. It was found that all but one species were in fact new. Owing to the lack of type material or the nature of the specimens three of these could not be matched with known plants. Some species had been seriously misunderstood and several taxonomic changes were accordingly made.

UITTREKSEL

DIE IRIDACEAE VAN DANIEL DE LA ROCHE: Die tesis, *Descriptiones Plantarum Aliquot Novarum*, deur Daniel de la Roche is bestudeer om die identiteit van 20 Suid-Afrikaanse Iridaceae soorte wat daarin beskryf word, vas te stel. Daar is gevind dat almal, met die uitsondering van een, nuwe soorte is. As gevolg van die gebrek aan tipemateriaal of die toestand van die eksemplare kon drie soorte nie met bekende soorte vergelyk word nie. Blykbaar was daar groot misverstand by sommige soorte en verskeie taksonomiese wysigings is as gevolg hiervan aangebring.

INTRODUCTION

In 1766 Daniel de la Roche's doctoral thesis, entitled *Descriptiones Plantarum Aliquot Novarum*, was published at Leiden. This thesis, supervised by David van Royen of Leiden University, contained what were believed to be descriptions of 20 South African species new to science. Fourteen of these were referred to *Ixia*, three to *Gladiolus* and the last three to de la Roche's new genus *Vieusseuxia*, which is today regarded as a subgenus of *Moraea*. The significance of de la Roche's work has been considerably underestimated. The thesis was dismissed by Hutchinson (1946) as a small paper of little importance. It must be pointed out that, on the contrary the paper was extremely significant in the history of the South African Iridaceae. Prior to the publication of de la Roche's study, only 22 species had been described, mostly by Linnaeus and usually only very briefly. The addition of 20 more species to the list was surely important. In view of this it is in fact surprising that no serious study of de la Roche's work has been made.

The thesis, published in book form, was widely distributed and de la Roche's specific epithets were in most cases taken into the literature. Although the

Accepted for publication 14th July, 1970.

SPECIMEN BOTANICUM
INAUGURALE,
SISTENS
DESCRIPTIONES PLANTARUM
ALIQUOT NOVARUM.

QUAM,
ANNUENTE SUMMO NUMINE,
Ex Auctoritate MAGNIFICI RECTORIS,
FRIDERICI BERNARDI ALBINI,

A. L. M. PHIL. ET MED. DOCTORIS, ANATOMES ET CHIRURGIE
IN ACAD. LUGD. BAT. PROFESSORIS ORDINARIJ,

NEC NON

*Amplissimi SENATUS ACADEMICI Consensu, &
Nobilissime FACULTATIS MEDICÆ Decreto,*

PRO GRADU DOCTORATUS,

Summisque in MEDICINA Honoribus & Privilegiis,
ritè ac legitime consequendis,

Eruditorum Examini Submitte

DANIEL DE LA ROCHE,
GENEVENSIS.

Ad diem 29. Aug. MDCCCLVI. H. L. Q. S.



LUGDUNI BATAVORUM,
Apud JOH. ET HERM. VERBEEK, 1766.

FIG. 1.

Frontispiece of de la Roche's doctoral thesis.

descriptions were fairly detailed and very good for that early day, the identity of the majority of his species has always remained doubtful because no type specimens could be located. Fortunately the thesis contained five coloured illustrations which have since been selected as types for the species concerned. These are *Ixia paniculata*, *Gladiolus permeabilis*, *G. involutus*, *G. carneus* and *Vieusseuxia spiralis*. The illustrations are fairly good and the species concerned can readily be identified with living plants except for *G. carneus* which has caused a little difficulty.

Although the identity of the remainder of the species was rather doubtful, several authors attempted to place them correctly, and as the present authors will show, often with remarkable accuracy. For example Ker referred the first four of de la Roche's *Ixias* to *Geissorhiza* and two of these were assigned to the correct species. Ker also referred *Ixia fabricii* to *Lapeirousia*, and *Ixia thyrsoiflora* to *Aristea*. Many of the early botanists did not recognise the priority rule so that although de la Roche's names are the earliest for the species they were regarded as synonyms.

The present study is an attempt to identify de la Roche's plants correctly, and to correct some of the taxonomic errors which exist with regard to them.

THE SEARCH FOR TYPE MATERIAL

1. *The nature of de la Roche's specimens*

De la Roche mentioned that most of his descriptions were made from dried specimens including his first 12 *Ixias*. He listed the source of few of his specimens. *Ixia fabricii* was described as having been received from F. W. P. Fabricius, a contemporary naturalist, and he stated that Van Royen provided a specimen of *Vieusseuxia aristata*. Some of de la Roche's plants were described from living specimens, among them the species of *Gladiolus*, *Ixia crocata*, *I. paniculata*, *Vieusseuxia spiralis* and *V. fugax*. With the exception of the two *Ixias*, these plants were flowered in the gardens of Van Hazen, a commercial flower grower at Leiden. *V. fugax* was illustrated in a Catalogue of Plants issued by Van Hazen and as de la Roche quotes this illustration it serves not only to identify the species but is the type.

2. *Linnaeus' annotated copy of the thesis*

In the Linnaean Library (London) there is a copy of the thesis which was annotated by Van Royen who sent it to Linnaeus in February 1767. The notes added by Van Royen are in many instances very useful in helping to identify de la Roche's plants. It appears that Van Royen had specimens of several of the species which de la Roche described from dried material. The collection is far from complete and even those that Van Royen did have do not appear to

be types, for the phrase "I have a dried specimen" is often qualified, "but not branched" (for *Ixia imbricata*), or "but less complete" (for *I. secunda*).

Van Royen mentions which species were described from living plants and also states when he has illustrations of the plants. He noted that he had a traced copy of the specimen of *Ixia fabricii*, a problem species, but unfortunately this can no longer be found.

The marginal notes also reveal the location of the types of *Ixia* species 8, 9 and 10, namely *I. monanthos*, *I. latifolia* and *I. monadelpha*. These species were not known to Van Royen, who states that de la Roche had specimens from Burman's collection. Although it is not known whether the specimens today in the Burman collection are the same or whether de la Roche had duplicates, the former seems likely, for Burman usually had specimens sent from his collection returned to him. The specimens match the descriptions in every respect and it seems reasonable to assume these are holotypes.

3. The Burman and de Candolle collections

Specimens of de la Roche's species were borrowed from the Burman Herbarium and the de Candolle Herbarium both located at Geneva, de la Roche's native city. The Burman specimens were borrowed because de la Roche is known to have been in communication with Burman fil., and as indicated in the text of his thesis, saw and received specimens from Burman's collection. In addition the types of *Ixias* 8, 9 and 10 were believed to be in this collection.

For some time many of de la Roche's types were believed to be amongst Burman's collection. This idea seems to have originated with N. E. Brown (1929) but the reason for this assumption is not clear and cannot be accepted for any of the species other than the three *Ixias* mentioned by name in Linnaeus' annotated copy of the thesis.

De Candolle specimens were borrowed to check the statement in de Candolle's *La Phytographie* that Daniel de la Roche's specimens were situated in the de Candolle Herbarium. The types of the 20 species under discussion do not appear to be in this collection and judging from the material sent on loan all the specimens are of a later date. As this collection proved of no use it will not be discussed further.

The Burman collection proved useful but as was expected, contained no evidence that any of the specimens were the types or had even been seen by de la Roche. Indeed it appears that Burman knew most of de la Roche's plants only from the written descriptions, for many are obviously incorrectly identified and sometimes species in different genera bear the same de la Roche specific epithet. Specimens of the species of *Ixia* described from Burman's collection were present and constitute the most significant of those loaned from Geneva.

4. The Van Royen collection

The discovery which initiated the present study was the information that specimens of *Gladiolus involutus* and *G. permeabilis* (both of de la Roche) which were loaned to the S.A. National Herbarium from the Rijksherbarium at Leiden, contained manuscript drafts of the descriptions of these two species which de la Roche published. Two foolscap sheets were found in the folders with each species, one a rough draft and the other a fair copy, endorsed "made by me for the use of D (ominus) de la Roche" and dated 15th and 17th August 1766 respectively for *G. involutus* and *G. permeabilis*.

This news led the present authors to request from Leiden the loan of all the specimens of the species described by de la Roche that were in Van Royen's collection. It was hoped that this collection would contain if not type material, at least correctly identified specimens as Van Royen must have known exactly what de la Roche's species were.

The material from Leiden proved to be extremely interesting. There appear to be specimens of only 14 of de la Roche's species in the Van Royen collection (including the two *Gladiolus* species mentioned). Amongst these are several more manuscripts in Van Royen's hand, containing descriptions of *Ixia iridifolia*, *I. paniculata*, *Vieusseuxia spiralis*, *V. fugax* and *V. aristata*. In addition there is a draft on the description of *V. aristata* in another hand, presumed to be that of de la Roche himself.

This raises the question about how much of the description was in fact written by de la Roche. Probably Van Royen merely corrected and rewrote de la Roche's descriptions. There is some evidence for this, as Van Royen wrote at the top of the rough draft for *G. permeabilis* the note that, "the leaves cannot be *linearibus*", but subquadrangular, *linearibus* implies that the leaves are flat". Is this the tutor correcting his student?

There is no indication that any of the specimens are type material but an examination of the specimens reveals that, with the possible exception of *V. aristata*, all specimens are the same species as described by de la Roche. Some may even be type specimens but there seems to be no way of proving this especially as the descriptions are not so detailed as to reveal the exact number of flowers or branches or leaves, or the exact length of these structures.

THE IDENTIFICATION OF SPECIES

Following the information obtained from the study of herbarium specimens and Linnaeus' copy of the thesis, a detailed examination of de la Roche's descriptions was made. As a result, almost all the 20 species could be identified with confidence. The results of the study will be discussed for each species following the sequence of de la Roche.

IXIA

1. *I. inflexa*

At present this is known as *Hesperantha inflexa* (de la Roche) Foster. It was transferred to *Hesperantha* by Foster (1941) who noticed the similarity of the colouring of the flowers of *Hesperantha metelerkampiae* L. Bol to de la Roche's description. Other features which were perhaps more critical were ignored. De la Roche described the plant as having a filiform style. This is not a feature of *Hesperantha*, which has a short style that branches at the throat of the perianth tube, a character which de la Roche would have recorded if it had been present.

Other features mentioned were the leaves bearing scattered hairs and the outer floral bract described as dry and withered, and almost as long as the corolla. *Hesperantha metelerkampiae* is quite clearly glabrous and although the outer bract is dry it is not as long as described and rarely reaches more than half the length of the corolla.

The plant named *Ixia inflexa* from Leiden matches de la Roche's description very closely. It is a species of *Geissorhiza*, typical in having a filiform style, divided at the apex into three short branches. It is villous, and has dry bracts reaching to the top of the flowers. It is also, as described, inflexed or bent at the base of the spike, making the flowers secund. This specimen matches very closely the plant at present known as *Geissorhiza quinquangularis* Ecklon ex Klatt.

The history of *Ixia inflexa* is illuminating. It was cited as a synonym of *Ixia hirta* Thunb. (1784). Later when Ker (1805) created the new genus *Geissorhiza* he recognised both *G. hirta* and *G. inflexa* which was based on de la Roche's species. *G. hirta* is a dark blue flowered form of de la Roche's plant. The name is illegitimate as it was superfluous when published but the species is regarded as the same as what is now known as *G. erosa*. Later authors also considered *Ixia inflexa* as a *Geissorhiza* and Baker (in Thistleton-Dyer 1896) recognised it as a distinct species although he knew it only from the description and cited *G. vaginata* Sweet (actually a *Hesperantha*) as a synonym.

The present authors regard *Geissorhiza erosa* as a variety of *G. quinquangularis* (i.e. *G. inflexa*) for it differs only in flower colour and general size and the distribution of the two overlaps considerably. The variety *G. erosa* var *kermesiana* (Klatt) Foster, regarded as being a smaller plant with fewer flowers is variable and the present authors have observed specimens from the same population that are large with many flowers. The variety is thus not really separable from *G. erosa*. The variety *G. quinquangularis* var *atrofaux* is merely a colour form of the species and should be reduced to synonymy.

De la Roche's plant is now believed to be correctly understood and must be

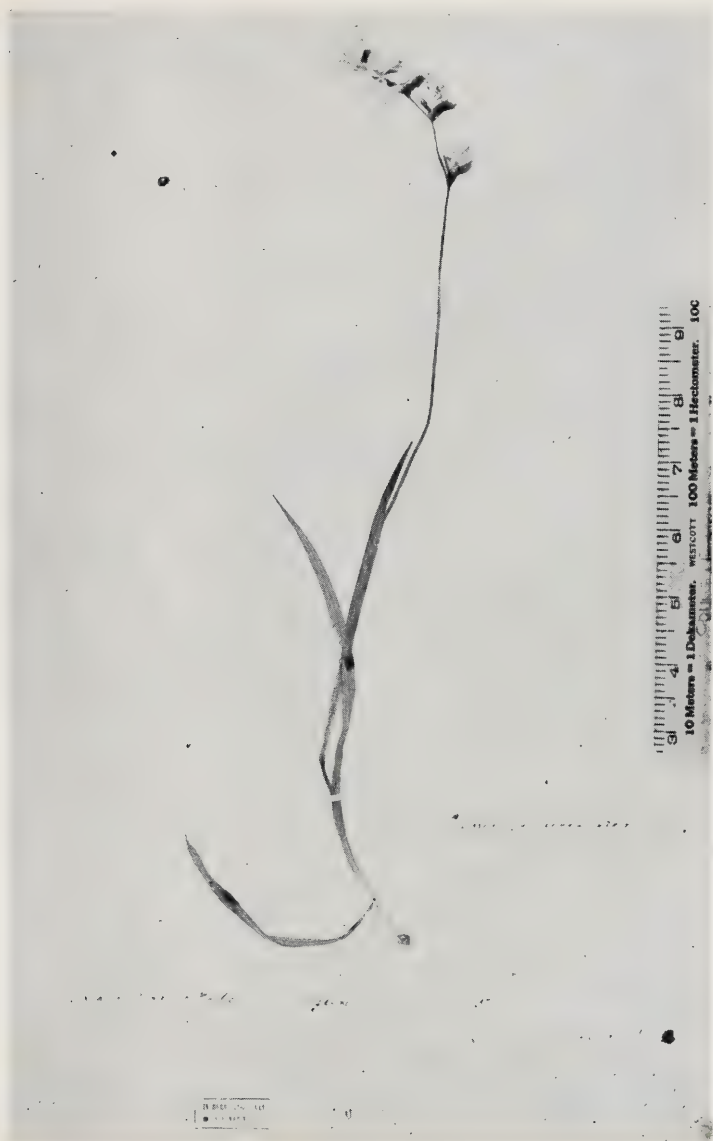


FIG. 2.

The specimen labelled *Ixia inflexa* from Van Royen's collection at Leiden, which gave a clue as to the true identity of this species.

known as *Geissorhiza inflexa*. As the type specimen is not known a neotype is proposed for this species. The specimen which has been chosen is *Barker* 3869 from Lion's Head, Cape Pen. (BOL, NBG), which is one which matches the description closely. The following changes must be made.

Geissorhiza inflexa (de la Roche) Ker in K. & S. Ann. Bot. **1**: 224 (1805). *Ixia inflexa* de la Roche, Descr. Pl.; 15 (1766) Neotype: *Barker* 3869 (BOL, NBG)!

Hesperantha quinquangularis Eckl., Top. Verz.: 23 (1827) nom nud.

Geissorhiza quinquangularis Eckl. ex Klatt in Linnaea **34**: 654 (1866) Holotype: *Ecklon & Zeyher* 214 (B) Isotype SAM!

Hesperantha quinquangularis (Eckl. ex Klatt) Klatt in Durand & Schinz, Conspec. Fl. Afr. **5**: 176 (1893).

Geissorhiza hirta var *quinquangularis* Bak., Handbk. Irid: 156 (1892). Lectotype: *Ecklon* 312 (K).

Geissorhiza quinquangularis var *atrofaux* Foster in Contr. Gray Herb **135**: 55 (1941) Holotype: *Schlechter* 5210 (B) Isotype SAM!

Geissorhiza graminifolia var *bicolor* Bak., Handbk. Irid: 155 (1892) Lectotype: *MacOwan* 261 (K) (isotypes BOL. SAM!).

Geissorhiza inflexa var *erosa* (Salisb.) Goldblatt stat. nov. et comb. nov.

Ixia erosa Salisb., Prodr. 36 (1796), basionym. Type: unknown. Neotype: *Leighton* 1338 (BOL!).

Geissorhiza erosa (Salisb.) Foster in Contr. Gray Herb. **135**: 52 (1941).

Hesperantha kermesiana Klatt, Erganz.: 61 (1882) Holotype: *Drege* 8480 (excl. plant marked a) (B).

Geissorhiza erosa var *kermesiana* (Klatt) Foster in Contr. Gray Herb. **135**: 53 (1941).

Ixia hirta Thunb. Diss. Ixia 6 (1784) nom. illeg. Holotype: Herb. Thunb. 958 (UPS) microfiche!

Geissorhiza hirta (Thunb.) Ker in K. & S. Ann. Bot. **1**: 224 (1805).

The species of *Hesperantha* to which Foster mistakenly applied the name *H. inflexa* must now be known by an earlier epithet based on *Geissorhiza vaginata*. The present authors have noted that a variety of the present *H. inflexa* i.e. var *stanfordiae* has no taxonomic value as it is only a concolorous form of the species. In some localities both colour varieties occur together (*Goldblatt* 352 BOL). This opportunity is taken to reduce this variety as well as to correct the nomenclature of this species.

Hesperantha vaginata (Sweet) Goldblatt comb. nov.

Geissorhiza vaginata Sweet in Brit. Fl. Gard. **2**: t.138 (1826), basionym. Holotype: illustration as cited in Brit. Fl. Gard.



FIG. 3.

The specimen labelled *Ixia quadrangula* from Van Royen's collection. The specimen is identical to *Gladiolus linearis* (L.f.) N. E. Brown.

Hesperantha metelerkampiae L. Bol. in Ann. Bot. Herb. **4**: 114 (1927)
Holotype: *Metelerkamp s.n.* (BOL 18555)!

Hesperanthe stanfordiae L. Bol. in S.A. Gard. **21**: 282 (1931) Holotype
Buhr. s.n. (BOL 19880)!

Hesperantha inflexa var *stanfordiae* (L. Bol.) Foster in Contr. Gray Herb.
166: 17 (1948).

Hesperantha inflexa sensu Foster (non de la Roche) in Contr. Gray Herb.
135: 77 (1941).

2. *Ixia quadrangula*

The identity of this plant has for many years been unknown. It has been referred to *Geissorhiza* but never matched with any living or known species of this genus. It was tentatively placed in *Geissorhiza* by Ker (1827) who regarded it as an imperfectly known species. It was treated as a *Geissorhiza* in *Flora Capensis* but has remained a species known only from the description.

There is a specimen bearing this name in Van Royen's collection and this proved on examination to be a species of *Gladiolus*. A study of the description reveals that this specimen matches closely all the characters mentioned by de la Roche. This plant is the same species as *Ixia linearis* Lf. (1781) and *Gladiolus biflorus* Klatt (1885). De la Roche's name is earlier than these and thus has priority. This species should now be known as *Gladiolus quadrangulus* as there is no bar to the use of this epithet in the genus *Gladiolus*. There is a similar name in the literature, *G. quadrangularis*, a later synonym for the plant now known as *Petamenes abbreviatus* (Andr.) N. E. Brown. As there is little likelihood of the similarity of these names causing confusion, it is admissible according to the rules of nomenclature.

The confusion over *Ixia quadrangula* is easy to understand. It is one of the few actinomorphic species of *Gladiolus* (Lewis 1954) and in this respect resembles *Geissorhiza*. The actinomorphic species of *Gladiolus* were regarded by Lewis as intermediate between this genus and *Geissorhiza* and are only recognised as belonging to the former by the possession of winged seeds.

The taxonomic treatment is as follows:

Gladiolus quadrangulus (de la Roche) Barnard comb. nov.

Ixia quadrangula de la Roche Descr.: 16 (1766), basionym. Neotype: Goldblatt 525 (BOL).

Geissorhiza quadrangula (de la Roche) Ker. Genera Iridacearum: 88 (1827).

Ixia linearis Lf. Suppl.: 92 (1781) Type: Herb. Thunb. 958 (UPS)!

Gladiolus linearis (Lf.) N. E. Br., in J. Linn. Soc. Bot. **48**: 48 (1928).

Gladiolus biflorus Klatt in Trans. S.A. Phil. Soc. **3**: 198 (1885). Holotype: MacOwan 2279 (SAM)!

3. *Ixia imbricata*

This species was apparently quite well understood in spite of the absence of any type specimens. Ker (1805) transferred this species to *Geissorhiza* when he first described this genus, and it has since remained in this position. There is a specimen referred to this species in the Burman collection and it appears to be correctly identified, but there is no specimen in the Van Royen collection.

As there seems to be no difficulty in identifying de la Roche's species with the Burman specimen this can be taken as the standard but it is not the type for it lacks the branches mentioned in the description. The authors propose *Salter 7034* (BOL) from Lakeside, Cape Peninsula as the neotype. This specimen has slender branches and is the same height as the plant described by de la Roche. This species remains:

Geissorhiza imbricata (de la Roche) Ker in K. & S. Ann. Bot. **1**: 224 (1805).

4. *Ixia secunda*

This is another species of *Geissorhiza*. It was transferred here by Ker (1805) who placed *Ixia secunda* Bergius (1767) in the same genus. These are two different species as Ker realised. Instead of recognising the priority of de la Roche's epithet, he called Bergius' plant *Geissorhiza secunda*, and de la Roche's plant *Geissorhiza rochensis*. He had, prior to this, renamed de la Roche's *Ixia rochensis* (Ker 1803a). The plant which Ker described and figured was however, not the same species as de la Roche's *Ixia secunda*. Though both are similarly coloured, de la Roche's plant is larger and has broad leaves which in Ker's plant are subterete.

Both *Ixia secunda* of de la Roche and of Bergius were cited in the synonymy of *G. secunda* by Baker in *Flora Capensis*, and the true identity of de la Roche's plant remained confused. In his revision of *Geissorhiza*, Foster (1941) discusses this problem and is able to match a known plant, *Geissorhiza mathewsii* var. *eurystigma* (L. Bol.) Foster with de la Roche's plant. Although the present authors doubt the validity of the variety as it differs very little from the species, Foster's determination is upheld. De la Roche's description mentions the peculiar broad stigmas that are also found in *G. mathewsii*, and the colouring of the flower is the same.

This identification is further supported by a specimen from Van Royen's Herbarium. There is a single specimen named *Ixia secunda* de la Roche and this plant matches exactly collections of *Geissorhiza mathewsii* var. *eurystigma*.

Taxonomically the problem of the correct names of the two plants is complex. Bergius' plant is at present known as *G. secunda* (Berg.) Ker but this citation seems to be invalid. This is because *Ixia secunda* is illegitimate if applied to any but de la Roche's plant. The reason for this is that Bergius cited *Ixia*

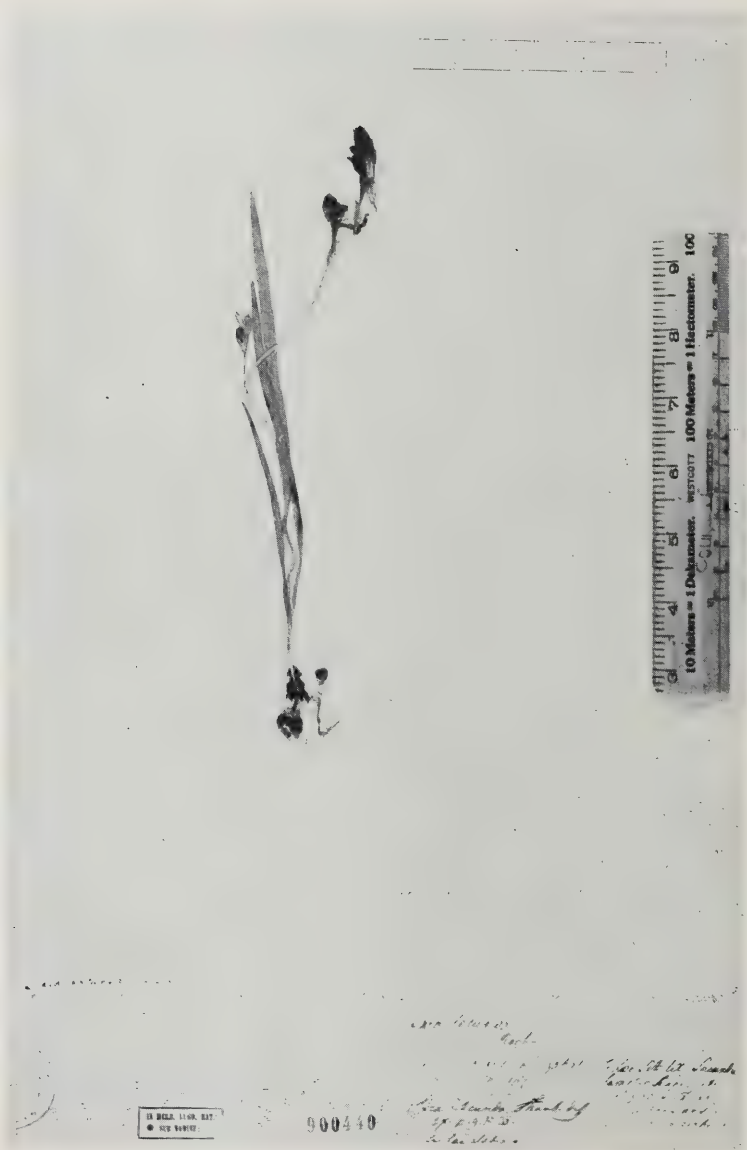


FIG. 4.

The specimen labelled *Ixia secunda* in Van Royen's collection. This specimen confirmed the suggestion that this was conspecific with *Geissorhiza mathewsii*, and that *Geissorhiza secunda* had been misinterpreted.

secunda de la Roche in the same work in which he published his *I. secunda*. Apparently Bergius had by coincidence also chosen the epithet *secunda* and when he received a copy of de la Roche's thesis, several months before his own work was published, he added an appendix at the end of his book citing *Ixia secunda* de la Roche as a synonym. This implies that he thought the two were the same, and according to present day rules of nomenclature he invalidated his species. In spite of this, Ker chose to transfer *Ixia secunda* Berg. to *Geissorhiza* as *G. secunda*, and, as he knew de la Roche's plant was a different species, he renamed it.

Foster (1941) was aware of this rather unsatisfactory state but he upheld *G. secunda* (Berg.) Ker. Foster's grounds for doing so were that it was an old and well known specific name which he thought proper to retain in spite of it being based on a later homonym. This decision does not unfortunately seem admissible as it is taxonomically incorrect. As there is no available synonym for the plant at present called *Geissorhiza secunda*, a new name *G. aspera* is proposed.

Geissorhiza aspera Goldblatt sp. nov. Holotype: *Goldblatt 501* (BOL).

Gladiolus junceus Burm. f., Prod. Fl. Cap.: 2 (1768) nom. nud.

Ixia secunda Berg. (non de la Roche), Pl. Cap. 6 (1767).

Geissorhiza secunda sensu Ker (non de la Roche) in K. & S. Ann. Bot. 1: 224 (1805).

Caudex cormus ovato- conicus, tectus squamis plurimis imbricatis lignosis, infra fisis. Folia 4—5, inferiora vaginata, superiora 3 laminata, lineata, glabra, raro longiora caule, media costa solum prominens. *Caulis* usitatis paucos ramos ferens, gracilis, flexuosus, asper. *Inflorescentia* laxa, 2—7 flores, inflexa. *Bractee* 2, obovatae, herbaceae sed brunnes-membranaceae supra, interiora breviora exteriore. *Corolla* sexpartita, perianthii tubus brevis, segmenta subaequalis, ± 1 cm longa, ± 4 mm lata, obovata subacuta, hyacinthina. *Stamina* 3, aequilaterialis, *Stylus* longus antheris, stigmata 3, recurva. *Fructificatio* capsula, semina globosa, angulata.

Geissorhiza secunda (Berg.) Ker apparently serves to bar the transfer of de la Roche's *Ixia secunda* to *Geissorhiza* and this plant accordingly remains *Geissorhiza mathewsii* var *eurystigma* (L. Bol.) Foster.

5. *Ixia fabricii*

This plant has long been recognised as a species of *Lapeirousia*, a genus created by Pourret (1788), but there is unfortunately no specimen of *I. fabricii* in either Burman's or Van Royen's collection to help with the identification of this plant. The description is however, fairly detailed and although the distinctive bifid stigmas of *Lapeirousia* were not observed by de la Roche, it can

readily be identified as *L. anceps* (L.f.) Ker. This is conspecific with *L. compressa* on which the genus was based.

De la Roche's description unmistakably applies to this species which is the only one with flattened stems, denticulate leaves, many branches and lilac flowers with a long perianth tube. The only difficulty which can be raised is the fact that the perianth tube is described as four times the length of the segments. Most specimens of this species have a shorter tube, approximately two and a half times the length of the segments. An examination of herbarium specimens reveals that the shorter tube is the norm, but a longer perianth as described by de la Roche does occur in some specimens.

There has in the past been considerable confusion about the identity of *L. fabricii* and at present the name is incorrectly applied to a second species. The identity and correct names of the two species is confused and both will have to be dealt with here. The confusion begins with the correct identity of *Lapeirousia anceps*. This was first described by Linnaeus fil. as *Gladiolus anceps*. In his description, Thunberg is cited as the source of the plant. There is a Thunberg specimen bearing this name in Herb. Linn. which is the same species as the specimen so named in Herb. Thunb. There are, however, two other specimens in Herb. Linn. also labelled *G. anceps* but are in fact another species. One of these, bearing the inscription, "Sp. 192" (presumably having been collected by Sparrman) bears the epithet "*decurrens*" in Linnaeus' hand.

Ixia decurrens is a Linnaean manuscript name appearing in the manuscript *Supplementum Plantarum* which was later published by Linnaeus fil. after his father's death. The description of *I. decurrens* is almost the same as the published description of *G. anceps* but in the manuscript, the plant is attributed to Sparrman. In the amanuensis draft of the *Supplementum*, the younger Linnaeus has deleted *Ixia decurrens* and substituted *Gladiolus anceps*. The amanuensis draft description has been altered very slightly by the younger Linnaeus so that the description remains essentially that of Linnaeus. In the published form the description still applies to the plant originally intended by Linnaeus and not to the Thunberg specimen.

The only important change made by the younger Linnaeus is the alteration of the word "*angulatus*" to "*anceps*" in the description of the stem. This latter term, meaning flattened applied better to the Thunberg specimen. Linnaeus fil., however, left the description of the corolla tube as being three to four times the length of the petals. This can only apply to the Sparrman plant, for in the Thunberg specimen the perianth tube is less than three times the length of the petals.

Thus *Ixia decurrens* was described by Linnaeus from a Sparrman specimen but in the published form of the description, altered slightly by Linnaeus fil., the name *Gladiolus anceps* is substituted, and the specimen attributed to Thun-

berg. As typified by the Sparrman specimen, the only one to which the description can apply, *G. anceps* should be recognised as the plant at present called *L. fabricii* and not what is presently known as *G. anceps* which is based on Thunberg's specimen.

The issue was further clouded by Thunberg, who in 1784 described *G. anceps* this time clearly referring to his own specimen, although he does cite Linnaeus fil. Subsequently in 1800 Thunberg described *G. fabricii*, the same species as Linnaeus' *Ixia decurrens*. Thunberg cites *Ixia fabricii* de la Roche in the description which is thus regarded as the basionym. Thus *Gladiolus fabricii* Thunb. is typified not by the specimen so labelled in Thunberg's Herbarium but by de la Roche's species which he erroneously believed to be the same. Thunberg created more confusion in his *Flora Capensis* (1823) by citing *Ixia fabricii* de la Roche as a synonym of both *G. anceps* and *G. fabricii*.

The species today regarded as *Lapeirousia fabricii* is the same as Thunberg's specimen of *Gladiolus fabricii* but as this specimen is incorrectly identified, the name *L. fabricii* must apply to de la Roche's species, which is at present known as *L. anceps*. The correct identity of *L. anceps*, based on Linnaeus fil's *Gladiolus anceps* is Thunberg's *Gladiolus fabricii*, at present called *L. fabricii*. Thus the names of these two species must be transposed.

The taxonomic treatment and synonymy of the two species is as follows:

Lapeirousia fabricii (de la Roche) Ker in Bot. Mag. t.1246 (1810).

Ixia fabricii de la Roche, Descr. 5 (1766) non sensu Thunb. (1800) Neotype: *Leipoldt s.n.* (BOL 17111)!

Gladiolus denticulatus Lam., Encyc. 2: 728 (1786) Type: Herb. Lamarck (P).

Lapeirousia denticulatus (Lam.) Lawrence in Baileya 3: 134 (1955).

Lapeirousia compressa Pourret in Mem. Ac. Sci. Toul. 3: 79–82 (1788) Holotype: in Mem. Ac. Sci. Toul. t.6 (1788).

Lapeirousia aculeata Sweet, Hort. Brit. ed. 1: 396 (1827) nom. nud.

Peyrousia aculeata Sweet in Brit. Fl. Gard. ser. 2 t. 39 (1830) Holotype: in Brit. Fl. Gard. ser. 2 t. 29.

Meristostigma aculeata (Sweet) A. Dietr., Sp. Pl. 2: 593 (1833).

Ovieda aculeata (Sweet) Klatt in Linnaea 32: 777 (1863).

Lapeirousia serrulata Schltr. in Journ. Bot. 3: 432 (1897) Holotype: *Schlechter 9099* (B) Isotypes BOL, K, SAM!

"*Gladiolus anceps*" sensu Thunb. (non L.f.) Diss. Gladiolo 17 (1784).

"*Lapeirousia anceps*" sensu Ker in K. & S. Ann. Bot. 1: 238 (1805).

"*Ovieda anceps*" sensu Sprengel, Syst. Veg. 1: 147 (1825).

"*Peyrousia anceps*" sensu Poir, Dict. Sc.

"*Meristostigma anceps*" sensu A. Dietr., Sp. Pl. 2: 593 (1833).

Lapeirousia anceps (L.f.) Ker in K. & S. Ann. Bot. 1: 238 (1805).

Gladiolus anceps L.f. Suppl.: 94 (1781). Holotype: *Sparrman 192* Linn. Herb. 59/20 (microfiche).

Lapeirousia pentheri Bak. in Kew Bull: 27 (1906). Type: *Penther 728* (BOL); Isotypes (BM, KEW)!

"*Gladiolus fabricii*" sensu Thunb., Prod. Pl. Cap.: 186 (1800) non de la Roche (1766).

"*Lapeirousia fabricii*" sensu Ker in Bot. Mag. Sub t. 1246 (1809).

"*Ovieda fabricii*" sensu Sprengel, Syst. 1: 147 (1825).

"*Peyrousia fabricii*" sensu Sweet, Hort. Brit. ed. 2: 499 (1830).

"*Meristostigma fabricii*" sensu A. Dietr., Sp. Pl. 2: 593 (1833).

6. *Ixia bulbocodioides*

According to de Vos (private communication) the plant at present known as *Romulea bulbocodioides* (de la Roche) Ecklon is not the species that de la Roche described as *Ixia bulbocodioides*. The original description is quite detailed and there is no doubt that de la Roche did have a species of *Romulea*, but he described the corm as having a hard woody covering and campanulate with a circular base. The corm of the plant presently, but erroneously known as *R. bulbocodioides*, is asymmetric, having an obliquely flattened base with a crescent-shaped ridge; the correct name for this species is *R. flava* based on *Ixia flava* Lamarck.

De Vos regards the identity of de la Roche's plant as doubtful, for although it resembles *R. triflora* (Burm. f.) N. E. Brown, the description of the leaf does not quite correspond with this species. Unfortunately, no type or authentic specimen for *Ixia bulbocodioides* can be found. Van Royen states in the annotated copy of the thesis that he did have a specimen of this plant, but this specimen can no longer be found in his collection.

Until *Ixia bulbocodioides* can be more confidently identified the name should perhaps be discarded, and what is today called *R. bulbocodioides* should be re-named with the next available epithet:

Romulea flava (Lam.) de Vos; nov. basionym, *Ixia flava* Lamarck, Encyc. III, 1: 109 (1791). Holotype: Herb. Lamarck (P).

7. *Ixia thyrsiflora*

In his study of Burman's herbarium, Brown (1929) stated that the specimen named *I. thyrsiflora* was the same as de la Roche's plant, and on this basis he transferred this de la Roche species to *Aristea* as synonymous with *A. major* Andr. (1801) and *A. capitata* (L.) Ker. In his revision of *Aristea* (Weimark 1940) accepts this combination and regards the Burman specimen at Geneva as the type of de la Roche's plant.

An examination of de la Roche's description and the foot-note he adds to it reveals that the above is incorrect. De la Roche describes a plant with an inflorescence of about a foot or more in length, with a flexuose axis, which has short branches closely applied to the stem. The footnote explains that a plant which he received from Burman is not the same. The description of this specimen reveals that this is unbranched with the flowers in a simple spike. A joint below the spike from which a small leaf is produced is also mentioned. De la Roche concludes that although Burman's plant differs in many respects it is similar enough to be regarded as the same species. As de la Roche was dealing mostly with *Ixia*-like plants, the similarity of two *Aristeas* would naturally have lead him to this conclusion. There is, however, little doubt that the so called type of *Ixia thyrsoflora* in Burman's collection is this latter plant mentioned in the footnote, which differed somewhat from the species de la Roche actually described.

As *Aristea* is far better known today it is clear that de la Roche's plant, though similar to Burman's, belonged to a different species. From the description *Ixia thyrsoflora* is very difficult to recognise because *Aristea* species are distinguished on fruit and seed characteristics, not noted in detail by de la Roche. In the absence of a type specimen it is therefore necessary to discard this name.

The plant at present referred to *A. thyrsoflora* should then be known by a later epithet. Brown mentioned two, *A. major* Andrews and *A. capitata* Ker. The latter name is really a Linnaean epithet, Ker (1803b) having transferred *Gladiolus capitatus* L. (1753) to *Aristea*. Today *A. capitata* (incorrectly attributed to Ker alone) is applied to a different species from the one Ker actually illustrated which is the same as Andrew's *A. major* and Burman's *A. thyrsoflora*. Presumably then *A. capitata* sensu Weimarck, but not as illustrated by Ker, is assumed to be the same as Linnaeus' *Gladiolus capitatus*. The latter plant cannot be typified so its identity can only be determined from the description. This is extremely brief and refers to a very large, blue flowered plant with a capitate inflorescence. While this is clearly most likely to be an *Aristea*, the present authors agree that it is not possible to identify the plant with any one of the larger *Aristea* species. Consequently this name should also be discarded.

Aristea major Andr. is thus the earliest valid synonym for *A. thyrsoflora* sensu Burman (non de la Roche). *Aristea capitata* sensu Weimarck and Ker (non Linnaeus) is now without a name and *A. confusa* is proposed.

Aristea major Andrews in Bot. Rep. t. 160 (1801) Holotype: illustration cited in Bot. Rep.

Aristea spicata Persoon, Syn. Pl. 1: 41 (1805) nom. illeg. (type as for *A. major* Andr.).

"*Aristea thyrsiflora*" sensu Brown (non de la Roche) in Kew Bull **1929**: 36; sensu Weimarck in Lunds Univ. Arssk. **36**: 86 (1940)

"*Aristea capitata*" sensu Ker (non Linn) in Bot. Mag. t. 605 (1803).

Aristea confusa Goldblatt sp. nov. Holotype: *Stokoe s.n.* (BOL 17518).

"*Aristea capitata*" sensu Weimarck (non Ker nec Linn.) in Lunds Univ. Arssk. **36**: 86 (1940).

Planta robusta ad 1m alta. *Caudex* rhizomata erecta; folia 3—6 rigida ad 40 cm. *Inflorescentia* 20—35 cm longa, paniculata ramis brevibus, ad axis flexus. *Bractee* ovata acuta vel acuminata, scariosa, brunnea. *Corolla* pedicellata, perianthii segmenta ad 20 mm longa, et 8 mm lata, obovata cuneata. *Staminum* filamenta 7—8 mm longa, antherae oblongae 3 mm longae. *Stylus* 8—9 mm longus, stigmata subglobosa. *Capsula* ad 15 mm longa, 8 mm lata, trialata; semina in eodem loculo 2—3 vel raro ad 4, lamelliformia ad 5 mm longa irregulariter ovatoangulato, marginibus papillis brevibus densis munita.

8. *Ixia latifolia*

According to Linnaeus' annotated copy of the thesis this is one of the species described by de la Roche from a Burman specimen and there is no problem about its identification. Both the specimen in van Royen's and the one in Burman's collection are of the same species and match the description. In her revision of *Ixia*, Lewis (1962) regards the Burman specimen as the holotype, a decision which the present authors accept. The species remains

Ixia latifolia de la Roche

9. *Ixia monanthos*

Ixia monanthos was also described from a specimen sent to de la Roche by Burman. Van Royen's collection contains no specimen of this species and there is only a single specimen in Burman's collection. This specimen is remarkably like the plant described and should be regarded as the holotype. N. E. Brown (1929) believed that the inscription on this specimen which reads "*Ixia monanthos floruit 1759*," was in de la Roche's hand. This is very unlikely as de la Roche was at that date only sixteen years old. An examination of the script reveals that it is very similar to that of Burman senior, a more likely answer. If this is so, then strictly speaking the species should be cited as Burman ex de la Roche.

This plant has caused some difficulty in identification but it is closest to *Sparaxis grandiflora* subsp. *acutiloba* Goldblatt. The difference is that *Ixia monanthos* has large dark markings in the centre of the perianth segments, a character not observed in any specimens of this subspecies of *Sparaxis grandi-*

flora. This has led to the suggestion (Goldblatt 1969) that it is perhaps a hybrid. At the rank of subspecies the name *monanthos* does not have priority so that even if it can be determined with certainty, no name change will be necessary.

10. *Ixia monadelphapha*

This is the last of the three species described from Burman's specimens. The Burman collection contains two specimens of this species, one a Houttyn specimen acquired later than 1766 by Burman. The other is probably de la Roche's specimen. In her revision of *Ixia*, Lewis (1962) accepted this specimen as the holotype and this decision must be supported.

There are several sheets of this species in Van Royen's collection, all bearing the correct name, and these serve to confirm the identity of de la Roche's plant which remains known as

***Ixia monadelphapha* de la Roche**

11. *Ixia grandiflora*

From the description of its bracts and flower this species can easily be identified as a *Sparaxis* and is the plant now recognised as *S. grandiflora* (de la Roche) Ker subsp. *grandiflora*. In a revision of *Sparaxis* (Goldblatt 1969), a neotype was selected for this species. The specimens of this plant in Burman's Herbarium were rejected as possible types, for there was and still is no reason to suppose that de la Roche described this species from Burman's material.

There are also several specimens of this species in Van Royen's collection. De la Roche probably saw those that were contemporary but the exact age of the specimens is not known. The presence of specimens of this species in Van Royen's collection named *Ixia grandiflora* de la Roche, confirms its identity, but there is no reason to suppose that any of the specimens are type specimens either. Thus the neotype which has been selected remains the type of this species, now called

Sparaxis grandiflora* (de la Roche) Ker subsp. *grandiflora

12. *Ixia flabellifolia* de la Roche

There was for a long time considerable doubt about the identity of this species. It appears to have been disregarded until N. E. Brown (1929) found specimens bearing this name in Burman's Herbarium. Of the four specimens he found, two were species of *Babiana*, one an *Engysiphon* and the last Brown identified as de la Roche's species. This was the same as the plant known then as *Acidanthera capensis* and Brown made the new combination *Acidanthera flabellifolia* as this epithet was the oldest for the species. This species was

transferred to *Tritonia* by Lewis (1941) who presumably accepted the Burman specimen as the type though she does not indicate this.

There are several specimens of this species in Van Royen's collection all labelled *Ixia flabellifolia*. Neither these nor the Burman specimen have any claim to be type material. There is one specimen in Van Royen's collection which conforms closely to the description in size, length of perianth tube and number of branches. It is mounted on the top left of a sheet with two others but these do not appear to belong to the same collection. It is proposed that this specimen be selected a neotype for

***Tritonia flabellifolia* (de la Roche) Lewis**

13. *Ixia iridifolia*

There seems to be no doubt of the identity of this species as de la Roche cites Miller's *Icones*: 160, t. 239 f.2. This is an illustration of the plant known today as *Tritonia crocata* (L.) Ker.

De la Roche mentioned that he saw live specimens of Miller's plant, and he probably also had dried specimens. It is therefore unlikely that Miller's illustration is also the type of de la Roche's plant. There are many specimens of this species in both the Burman and Van Royen collection. None of those in the former collection is labelled "*iridifolia*" but bear the earlier Linnaean epithet "*crocata*" and are in fact a mixed collection of several species. In the Van Royen collection all the plants are *T. crocata* and bear the name *I. iridifolia* as well as *I. crocata*. Amongst these is a manuscript in Van Royen's hand where *Ixia iridifolia* is described. There are three drafts of the description and the final one, not dated, matches the published description almost exactly. It is possible that the type is amongst these specimens but no specimen can be chosen with certainty.

Miller's plant can perhaps be regarded as a lectotype as it was cited by de la Roche. It does not, however, match the description for it lacks branches and has somewhat different colouring. Because of this difference the present authors prefer to select a neotype. The specimen in Van Royen's Herbarium with which the manuscript was found matches the description best and this is proposed as the neotype.

De la Roche's mistake in considering *Ixia iridifolia* a new species is easy to understand, and perhaps justified. The description of *Ixia crocata* L. was published in the *Species Plantarum* ed. 2 vol. 1: 52 (1762) and contains a reference to Miller, *Icones*: t. 156 f.1. This illustration which is of *Ixia maculata*, does not quite tally with the description, but hardly suggests an error. In the second volume of this edition of the *Species Plantarum* (1763) Linnaeus describes *Ixia maculata*, referring to the same plate of Miller's *Icones*, leaving *Ixia*

crocata without any reference to its type. Thus, with the rather short description typical of Linnaeus, *Ixia crocata* was difficult to identify, and remained so, until a correction was published referring to a different illustration in Miller's *Icones*: 239 f.2 (Linnaeus 1767b). As it is possible to identify *Ixia crocata* with confidence, *Ixia iridifolia* must be considered a later synonym. The plant is now known as

***Tritonia crocata* (L.) Ker.**

14. *Ixia paniculata*.

This was illustrated by de la Roche (t.1) and its identity has never been in doubt. In the revision of *Ixia*, Lewis (1962) cites the illustration as a lectotype of *I. paniculata*. There is a plant in Van Royen's Herbarium strongly resembling the illustration, having amongst other similarities a four-branched inflorescence. This is perhaps the specimen from which the drawing was made, but as a lectotype has already been chosen this possibility can be ignored. Strictly speaking, de la Roche's illustration should have been designated a holotype since no other possible type material was then known. The presence in Van Royen's collection of the specimen which may have been the one illustrated, does however, vindicate the decision.

GLADIOLUS

The species of *Gladiolus* described by de la Roche have presented no problem as all three were illustrated (t. 2, 3, 4). The first two, *G. permeabilis* and *G. involutus* are well known species and appear to be known correctly by de la Roche's epithets.

There are specimens of these two species in van Royen's collection at Leiden, and with both are draft manuscripts of the descriptions which appear in de la Roche's thesis. As mentioned earlier, it appears that van Royen did not approve of de la Roche's descriptions and these were corrected and re-written by his tutor.

The illustrations can conveniently be regarded as holotypes. The specimens containing the draft manuscripts are possibly those from which the drawings were made. As this cannot be determined, the specimens cannot with certainty be regarded as types. They do, however, confirm the identity of the species.

Gladiolus carneus is recognised as a form of *G. blandus* Ait. (1789). The latter name was recognised by Baker (in Thistleton-Dyer, 1896) but *G. carneus* has priority. As this is apparently the oldest valid epithet for this species it is the one by which it must be known. There appears to be no specimen of this species in Van Royen's collection, and the illustration in de la Roche's thesis must be regarded as the holotype.

VIEUSSEUXIA

This was a genus first described by de la Roche and he included in it three species now regarded as belonging to the genus *Moraea*. This genus is older than *Vieusseuxia*, having been mentioned by Linnaeus in 1762 and subsequently described in 1764. *Moraea* was only later described more fully in the *Mantissa Plantarum* (1767a) and only then did it become clear that *Vieusseuxia* was synonymous with it. De la Roche can perhaps be pardoned for rejecting *Moraea*, which at the time his thesis was published, was rather imperfectly understood. It is clear that he really agreed with Linnaeus about the existence of a South African genus resembling, but distinct from *Iris*, and the name he proposed, *Vieusseuxia* was only later found to be synonymous with *Moraea* of Linnaeus.

The thesis contains one gross typographic error. The names of *Vieusseuxia fugax* and *V. aristata* have been transposed in print. This error was recognised by the botanists who followed de la Roche, including Burman (1768), Jacquin (1776), Houttyn (1780) and Ker (1803) and Van Royen who corrected the error in the copy of the thesis sent to Linnaeus and annotated by him. The error is clear from the description of the flowers of the two species as printed:

V. fugax petalorum vero interiorum trium laciniae media aristata, rectae
V. aristata flores lutei fugaces vix per trihorium persistentes

The above mentioned authors, realising the error changed the names round to read as they believed the author intended. Lewis (1948) discussed this problem and concluded that the names had to remain in the order in which they were published. According to the International Code of Botanical Nomenclature it appears that orthographic errors made by authors should remain as published but typographic errors should be corrected.

This error is clearly typographic, as not only do the descriptions fail to tally with the names, but the newly found manuscripts indicate conclusively that the names were transposed by the publishers.

1. *Vieusseuxia spiralis*

This is figured by de la Roche (t.5) and can be recognised as *Moraea bellendeni* (Sweet) N. E. Brown. There is one specimen of this species in Burman's collection but labelled *V. fugax*. The two specimens in Van Royen's collection, both bear the name *V. spiralis* and one is similar to de la Roche's illustration. As this is not certainly the type the illustration remains the holotype.

In the folder with this specimen are three draft descriptions of *V. spiralis* all in Van Royen's hand. The third, dated 15th August 1766, is the final description which was published. Again there is the question as to how much of the description was really written by de la Roche. In Van Royen's first draft, dated

June 1766, he writes "Royen apud de la Roche" i.e. Van Royen in the writings of de la Roche, which today we would interpret as Van Royen in de la Roche. It is, however, simpler and probably correct to credit de la Roche with authorship of this species and to regard Van Royen's contributions as corrections by his tutor.

Although it is the oldest name for this species, the transfer of *V. spiralis* to *Moraea* is barred by the occurrence of *M. spiralis* L.f. which is now known as *Aristea spiralis* (L.f.) Ker. The later synonym *V. bellendenii* Sweet, transferred to *Moraea* by N. E. Brown (1929) is now the correct name and *Vieusseuxia spiralis* de la Roche is correctly known as *Moraea bellendenii* (Sweet) N. E. Br.

2. *Vieusseuxia aristata*

De la Roche described this plant as being similar in habit to *V. spiralis* but about twice as large. He states that a dried specimen was provided by Van Royen. It is presumed that this was the same species as the specimen labelled *V. aristata* in the Van Royen collection, but probably not the specimen described by de la Roche, as there are several differences between the printed description and this specimen.

Two manuscripts were found in the folder with this specimen. One, in Van Royen's hand, is a draft of the published description and the other written in rather faint pencil and in a different hand appears to be an earlier draft. The Latin here is poor and often ungrammatical but the description is clearly the same in many respects to the Van Royen draft. A major difference is that the earlier author, presumably de la Roche, described the floral features in considerably more detail. The anthers and style structure are described so minutely that it is possible to identify the plant concerned as *Moraea gigandra*. This plant is peculiar in having large stamens which are longer than the style, and very short style crests, features quite unmistakably noted in this old manuscript.

In the final draft of the description the detail of the reproductive organs is ignored and they are described as being like *V. spiralis* which is not true of *M. gigandra* but is correct for the dried specimen in Van Royen's collection. Another alteration is that the claw of the outer perianth segments is described as hairy or bearded where the earlier draft merely states the colour (atro-violaceus).

It seems then that the earlier description was made of a different though similar species from the one Van Royen had in mind when he corrected and rewrote the final draft. This latter species was probably the same species as the dried specimen still in the collection. Van Royen's alterations were not however sufficient to avoid ambiguity, as several phrases from the earlier draft were left unaltered: the claw is described as dark purple and the markings on

the large outer perianth segments as concentric circles of yellow and purple, features which do not apply to the dried specimen. Thus *V. aristata*, as described, is somewhat ambiguous as it appears to be based on two different entities. Although it is clear that the description in the final form was intended to apply to Van Royen's dried specimen, the name should perhaps be discarded.

The actual identity of this dried specimen in Van Royen's collection is clear but the correct name is rather uncertain. The present authors agree with Lewis in identifying it with the very rare species of *Moraea* known only from the Observatory gardens in Cape Town. At present it is known as *Moraea tricuspidata* (L.f.) Lewis. In fact Lewis (1948) regarded *M. tricuspidata* and *V. aristata* (as *V. fugax*, because she did not consider the transposition of the two epithets as permissible) as synonymous. The name *Iris tricuspidata* on which *M. tricuspidata* was based, appears in the authors' opinion to apply to another species, at present known as *M. confusa*, a name chosen by Lewis for the plant previously known as *M. tricuspis* (Thunb.) Ker. This is actually identical to *M. tricuspidata* (L.f.) Lewis, for the younger Linnaeus altered Thunberg's epithet *tricuspis* slightly when he published that species a few years before Thunberg.

No changes in taxonomy are proposed here, however, for the authors feel that this group of species of *Moraea* are as yet rather imperfectly known and until further studies are made, it would be premature to suggest any changes to the nomenclature.

3. *Vieusseuxia fugax*

Erroneously transposed with *V. aristata* in the published thesis, the species to which the name correctly applies is at present known as *Moraea edulis* (L.f.) Ker. De la Roche cites Van Hazen, Catal. Arb. & Plant. p. 67, a commercial horticultural catalogue in which the species was illustrated. There is no specimen of the species in Burman's Herbarium but there are two at Leiden and one bearing the name of *V. fugax* which is not this species. Again there is a draft description by Van Royen which somewhat resembles the published description. On this manuscript which is not dated, Van Royen has added "*Moraea suaveolens* 1777" and he appears to have decided that this species was a *Moraea*. There is also a draft description of "*Moraea suaveolens*" dated 1780 but this was never published.

As there is no evidence that either specimen at Leiden is the type, Van Hazen's illustration must be chosen as a lectotype. The typographic error occurring in the thesis must be corrected and the plant at present named *Moraea edulis* must be known by the older epithet. The transfer of *Vieusseuxia fugax* to *Moraea* had already been made in 1776 by Jacquin several years before *Iris edulis* L.f. was described. The taxonomic treatment is as follows

Moraea fugax (de la Roche) Jacquin, Hort. Vindob. 3: 14 t. 20 (1776)

Vieusseuxia fugax de la Roche Descr. Pl.: 33 (1766)

Lectotype: van Hazen, Catal. Arb. & Pl.: 67 (1759)

Iris edulis L.f. Suppl. Pl.: 98 (1781) Holotype: Herb. Linn. 61/21 (microfiche)!

Moraea edulis (L.f.) Ker in Bot. Mag.: t. 613 (1803).

ACKNOWLEDGEMENTS

The authors wish to thank the curators of the Rijksherbarium, Leiden, and the Delessert Herbarium, Geneva, for the loan of the specimens and manuscripts used in this study. Thanks are also due to the Council of the Linnaean Society for copies of several old manuscripts, the curator of the Compton Herbarium, Kirstenbosch, for making available specimens for study and for the loan of a copy of de la Roche's thesis, to Professor E. A. Schelpe for his advice and useful criticism and to Mr. A. Fricke for help in preparing the plates.

REFERENCES

- ANDREWS, H. 1801. *Aristea major*, Bot. Rep. t.160.
 BERGIUS, P. J. 1767. *Plantae capenses*. Stockholm.
 BROWN, N. E. 1929. The Iridaceae of Burman's Florae Capensis Prodrum. *Kew Bull.* 1929: 129-139.
 BURMAN, N. L. 1768. *Prodromus Florae Capensis*. Leiden.
 DE CANDOLLE, A. 1880. *La Phytographie*. Paris.
 DE LA ROCHE, D. 1766. *Descriptiones Plantarum Aliquot Novarum*. Leiden.
 FOSTER, R. C. 1941. A revision of the genus *Geissorhiza*. *Contr. Gray Herb. Harv.* 135: 3-78.
 GOLDBLATT, P. 1969. The genus *Sparaxis*. *Jl S. Afr. Bot.* 35: 219-252.
 HOUTTYN, F. 1780. *Natuurlyke Historie*. II. 12. Amsterdam.
 HUTCHINSON, J. 1946. *A Botanist in Southern Africa*. London: Gawthorn.
 JACQUIN, N. 1776. *Hortus Vindebonensis*. Vol. 3 t.14. Vienna.
 KER, J. B. 1803a. *Ixia rochensis*. *Curtis's bot. Mag.* t.598.
 KER, J. B. 1803b. *Aristea capitata*. *Curtis's bot. Mag.* t.605.
 KER, J. B. 1805. *Ensatorum ordo*. *K. & S. Ann. Bot.* 1: 219-247.
 KER, J. B. 1827. *Genera Iridacearum*. Brussels.
 KLATT. 1885. Determination and description of Cape Irideae. *Trans. S. Afr. phil. Soc.* 3: 196-205.
 LEWIS, G. J. 1941. Iridaceae. New genera and species and miscellaneous notes. *Jl S. Afr. Bot.* 7: 19-59.
 LEWIS, G. J. 1948. A note on *Moraea aristata*. *Jl S. Afr. Bot.* 14: 86-89.
 LEWIS, G. J. 1954. Iridaceae—new species and miscellaneous notes. *Ann. S. Afr. Mus.* 40: 115-135.
 LEWIS, G. J. 1962. South African Iridaceae. The genus *Ixia*. *Jl S. Afr. Bot.* 28: 45-195.
 LINNAEUS, C. 1753. *Species Plantarum*. Vol. 1. Stockholm.
 LINNAEUS, C. 1762. *Species Plantarum*. ed. 2. Vol. 1. Stockholm.
 LINNAEUS, C. 1763. *Species Plantarum*. ed. 2. Vol. 2. Stockholm.
 LINNAEUS, C. 1764. *Genera Plantarum*. ed. 6. Stockholm.
 LINNAEUS, C. 1767a. *Mantissa Plantarum*. Stockholm.

- LINNAEUS, C. 1767b. *Systema Naturae*. ed. 12. Stockholm.
LINNAEUS, C. fil. 1781. *Supplementum Plantarum*. Brunswick.
POURRET, P. A. 1788. Genre *Lapeirousia*, *Mem. Acad. Sci. Toulouse*. 3: 79-82.
THISTLETON-DYER. 1896. *Flora Capensis*. 6. London.
THUNBERG, C. P. 1784. *Dissertatio de Gladiolo*. Uppsala.
THUNBERG, C. P. 1800. *Prodromus Plantae Capensis*. Uppsala.
THUNBERG, C. P. 1823. *Flora Capensis*. Stuttgart.
WEIMARCK, H. 1940. Monograph of the genus *Aristea*. *Lunds. Univ. Arask, N.F. Avd.* 2, 36: 1-138.

